



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/517,049

12/03/2004

Yasushi Kurata

043062

4277

38834

7590

04/01/2009

WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP
1250 CONNECTICUT AVENUE, NW
SUITE 700
WASHINGTON, DC 20036

EXAMINER

CHEN, KIN CHAN

ART UNIT

PAPER NUMBER

1792

MAIL DATE

DELIVERY MODE

04/01/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/517,049	Applicant(s) KURATA ET AL.	
	Examiner Kin-Chan Chen	Art Unit 1792	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 May 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) 12-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10032004,03192007,05092008</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of group I, claims 1-11 in the reply filed on April 9, 2008 is acknowledged. The traversal is on the ground(s) that there is no undue burden. This is not found persuasive because the composition as claimed can be used in a materially different process such as wet etching or optical abrading and because these inventions have acquired a separate status in the art as shown by their different classification. Besides it involves different search and would impose a serious administrative burden on the examiner.

The requirement is still deemed proper and is therefore made FINAL.

2. In view of new found prior art, the previous non-final rejection is withdrawn and the new non-final rejection is made.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section

Art Unit: 1792

351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Kurata et al. (US 2008/0003924).

In the polishing composition and method, Kurata discloses metal-oxidizing agent; a metal anticorrosive agent; an oxidized metal dissolving agent; and water, wherein the oxidized metal dissolving agent is at least one kind selected from the group consisting of an acid in which the negative value of the logarithm of the dissociation constant K_a (pKa) of a first dissociable acid group is 3.5 or more, an ammonium salt of the acid and an organic acid ester of the acid, the pH of the polishing slurry is within the range of 3 to 4, and the concentration of the metal-oxidizing agent is within the range of 0.01 to 3 percent by weight. The polishing slurry is capable of polishing a barrier layer. See [0021]-[0023] [0026] [0113] [0123].

As to dependent claims 3 and 4, Kurata discloses claimed organic acids. See [0026].

As to dependent claim 5, Kurata discloses claimed anticorrosive agent, See [0024].

As to dependent claim 6, Kurata discloses claimed oxidizing agent, see [[0053].

As to dependent claims 7-9, Kurata discloses claimed polishing particles and sizes, see [0045] [0130].

As to dependent claims 10-11, Kurata discloses claimed water-soluble polymer compound, see [116] [120].

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoneda et al. (US 2007/0045233).

In a method and composition for polishing, Yoneda discloses that metal-oxidizing agent; a metal anticorrosive agent; an oxidized metal dissolving agent; and water, wherein the oxidized metal dissolving agent is at least one kind selected from the group consisting of an acid in which the negative value of the logarithm of the dissociation constant K_a (pK_a) of a first dissociable acid group is 3.5 or more, an ammonium salt of the acid and an organic acid ester of the acid. Yoneda discloses that the pH of the polishing slurry may be 3-5 encompassing the claimed range, and the concentration of the metal-oxidizing agent may be 0.3 to 10% overlapping the claimed range. See [0030] [0031] [0034] [0040] [0084] [00135].

As to dependent claims 3 and 4, Yoneda discloses claimed organic acids. See [0040].

As to dependent claim 6, Yoneda discloses claimed oxidizing agent, see [0083].

As to dependent claims 7-9, Yoneda discloses claimed polishing particles and sizes, see [0090] [091].

Dependent claims 5, 10, and 11 differ from the prior art by specifying well-known features (such as anticorrosive agent in claim 5; water-soluble polymer compound in claims 10 and 11) to the art of CMP slurry and polishing. It is the examiner's position that a person having ordinary skill in the art at the time of the claimed invention would have found it obvious to modify the prior art by adding any of same well-known features to same in order to effectively polish the workpiece with a reasonable expectation of success.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kin-Chan Chen whose telephone number is (571) 272-1461. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nadine Norton can be reached on (571) 272-1465. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Application/Control Number: 10/517,049
Art Unit: 1792

Page 6

/Kin-Chan Chen/
Primary Examiner, Art Unit 1792

March 25, 2009